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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/761,465	01/16/2001	Robert J. Koffron	KOFF 0124 PUS	5262

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EXAMINER

KASTLER, SCOTT R

ART UNIT

PAPER NUMBER

1742

DATE MAILED: 11/01/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

TC-11

<b>Office Action Summary</b>	Application No. 09/761,465	Applicant(s) KOFFRON ET AL.	
	Examiner Scott Kastler	Art Unit 1742	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 24 October 2002.
- 2a) ☐ This action is FINAL.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-35 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 26-29 is/are allowed.
- 6) ☒ Claim(s) 1-25 and 30-35 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 January 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)                      4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)                      5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_                      6) ☐ Other:

***Continued Examination Under 37 CFR 1.114***

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 10-24-2002 has been entered.

***Claim Objections***

Claims 30-36 are objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. The above claims do not fairly further limit independent apparatus claims 1 and 13 because the limitations contained in the above claims recite only limitations directed to the manner or method of use of the claimed vortex inhibitor (the use of the inhibitor in molten metal containers containing molten metal which would cause the sacrificial member to dissolve at recited points during the discharge of molten metal). It has been well settled that the manner or method of use of an apparatus cannot be relied upon to fairly further limit claims to the apparatus itself. See *In re Casey*, 152 USPQ 235 and MPEP 2114.

***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Art Unit: 1742

Claims 1-25 and 30-35 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The above claims are indefinite because both independent claims 1 and 13 now recite that the sacrificial member be constructed to dissolve before they obstruct the discharge nozzle. However, without any indication as to what the molten metal is (molten steel, aluminum or mercury for example, all of which have different temperatures and properties), and the depth of metal in a vessel from which the molten metal is to be poured (the residence time of the sacrificial member in the molten metal), as well as the discharge rate out of the molten metal nozzle, it is impossible to ascertain which constructions (the sacrificial members) would meet the limitation of dissolving before obstructing the discharge nozzle, thereby making the scope of the claims unascertainable.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 4, 9, 13, 14 and 23-25 and 30-35 are rejected under 35 U.S.C. 102(b) as being anticipated by Eastwood. Eastwood teaches a vortex inhibitor comprising a uniform refractory body (2) having a generally tapering shape along a longitudinal axis from a base to a narrow end, and including a hollow chamber (3) which may include a shaft (15) and a "sacrificial member" (10) connected to the uniform refractory body, where the vortex inhibitor is inherently self

Art Unit: 1742

orienting when supported in the molten metal, thereby showing all aspects of the above claims, since the member (10) would eventually dissolve in some unspecified molten metal at some unspecified temperature before reaching a discharge nozzle in some unspecified amount of time and the above claims as explained previously, allow for any molten metal at any temperature where the vortex inhibitor is immersed in the molten metal for any time before reaching the discharge nozzle.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-25 and 30-35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Eastwood. As applied to claim 1 above, Eastwood teaches a vortex inhibitor showing all aspects of the above claims except the specifically recited connection means for connecting the sacrificial member (12) and the uniform refractory body (2), or the use of a sacrificial member which is either solid or refractory coated. However, Eastwood allows for the use of any desired connection means for connecting parts (2) and (12) (see col. 2 lines 28-31 for example). Eastwood also allows for the tail (12) to include a refractory surface (see col. 3, lines 50-54 for example). The subject matter as a whole would have been obvious to one of ordinary skill in the art at the time the invention was made because with respect to the particularly claimed connection means, as stated above, Eastwood allows for the use of any desired connection

Art Unit: 1742

means, and it is Officially noted that screw threads, crimps and protrusions are old and well known connection mechanisms in the refractory connection art. It would have been a modification obvious to one of ordinary skill in the art at the time the invention was made to substitute the connection means disclosed by Eastwood and employ any other art recognized equivalent connection means, since Eastwood specifically allows for such a substitution. With respect to the use of a refractory coating or a solid sacrificial member, again as stated above, Eastwood allows for the use of a sacrificial member with an exposed refractory surface, and it has been well settled that where a component (the sacrificial member) is shown by the prior art, motivation to alter the shape or configuration of the component (solid or hollow) without materially altering the function of the component would have been a modification obvious to one of ordinary skill in the art at the time the invention was made. See *In re Dailey*, 149 USPQ 47. Therefore, it would have also been obvious to one of ordinary skill in the art at the time the invention was made to employ a sacrificial member in Eastwood where the member is solid with a refractory outer surface, since Eastwood allows for an exterior refractory surface on a part of the sacrificial member and the configuration of the sacrificial member as either a solid or hollow bar would not materially alter the operation of the member or the apparatus as a whole.

***Allowable Subject Matter***

Claims 26-29 are allowed, at least because none of the cited prior art shows or fairly suggests a method of dispensing molten metal employing a vortex inhibitor where an elongated sacrificial member is dissolved prior to the point where the vortex inhibitor obstructs the discharge nozzle.

### ***Response to Arguments***

Applicant's arguments filed on 10-24-2002 have been fully considered but they are not persuasive. Applicant's argument that the tail (10) of Eastwood does not dissolve before entering the discharge nozzle is not sufficient to overcome the rejection of claims 1-25 and 30-35 because this is a method limitation dealing the manner or method of use of the claimed vortex inhibitor, and as such cannot be relied upon to fairly further limit claims to the apparatus (the vortex inhibitor) itself. See MPEP 2114 and *In re Casey*, 152 USPQ 235. This limitation however, when introduced to method claims 26-29 has rendered these claims allowable over the cited prior art.

### ***Conclusion***


The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Japanese'627 is also cited as a further example of prior art vortex inhibitors.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Scott Kastler whose telephone number is (703) 308-2506. The examiner can normally be reached on Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy King can be reached on (703) 308-3050. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9310 for regular communications and (703) 872-9311 for After Final communications.

Art Unit: 1742

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0651.



Scott Kastler  
Primary Examiner  
Art Unit 1742

sk

October 31, 2002